

Investigating Depression among Saudi Students during Covid-19 Strict Lockdown Measures

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ABSTRACT

The Covid-19 pandemic has had a significant impact on people's lives in many ways. One concern is the psychological impact which the pandemic has had resulting of many different factors including concern about contracting the virus, the effect it has on livelihoods, and the negative impact on life. This study sought to investigate the depressive symptoms among students in Saudi Arabia who are under lockdown restrictions due to the pandemic, and to test gender differences in terms of this depression and its symptoms. The study made use of the depression questionnaire developed by the researcher to assess the level of depression during the experiences of Covid 19. The results showed that a large majority of the participants showed no depression and its symptoms had mild effect. The Covid 19 questionnaire revealed that while students were concerned about infection, they felt that the lockdown measures have many benefits including allowing time to acquire knowledge and skills and to form relationships. There were also differences between male and female students in depression and its symptoms in favor of the female students.

Keywords: Depression, Saudi students, Covid-19, Strict Lockdown.

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الاكتئاب لدى الطلاب السعوديين أثناء إجراءات الإغلاق الصارمة لـ فيروس كورونا المستخلص:

كان لوباء Covid-19 العديد من الآثار الكبيرة على حياة الناس بـصور عديدة والتي تتمثل في المخاوف النفسية التي أحدثها الوباء نتيجة العديد من العوامل المختلفة مع الأخذ في الاعتبار القلق بشأن الإصابة بالفيروس، وتأثيره على طريقة التعامل مع الأمور الحياتية المختلفة، والآثار السلبية المترتبة على ذلك، ولقد سعت الدراسة الحالية إلى استقصاء مستويات الاكتئاب لدى الطلاب في المملكة العربية السعودية الذين يخضعون لقيود الإغلاق بسبب الوباء، واختبار الفروق بين الجنسين من حيث درجة الاكتئاب وأعراضه، ولقد استفادت الدراسة من استبيان الاكتئاب الذي طوره الباحث لتقييم مستوى الاكتئاب خلال إجراءات الإغلاق جراء فيروس كورونا، ولقد أظهرت النتائج أن الغالبية العظمى من المشاركين لم يظهروا اكتئاباً وكان للإغلاق تأثير محدود على مستويات الاكتئاب لدى الطلاب، ولقد كشفت نتائج الدراسة أنه بينما كان الطلاب قلقين بشأن العدوى، إلا أنهم ذكروا أن إجراءات الإغلاق كان لها فوائد عديدة بما في ذلك إتاحة الوقت لاكتساب المعرفة والمهارات وتكوين العلاقات، كما أظهرت النتائج وجود فروق بين الطلاب والطالبات في مستويات الاكتئاب وأعراضه لصالح الطالبات.

الكلمات المفتاحية: الاكتئاب، الطلاب السعوديون، فيروس كورونا، الإغلاق الصارم.

Introduction:

The end of 2019 witnessed the emergence of a new, strong strain of flu which was named Coronavirus 2019 (COVID-19). The epidemic emerged in Wuhan in the Hubei Province, one of China's largest cities with nearly 12 million people. There is still uncertainty about the origins of the virus which is still hypothesized as either being transmitted to humans from animals or in a laboratory in the same city. The strict quarantine measures in China appeared to be successful as the official number of under 5000 (in its first phase) recorded deaths. Consequently, many countries acquired the same lessons from China and implemented World Health Organisation (WHO) guidelines in order to combat the spread of the virus. This study assesses the magnitude of the prevalence and source of depression issues related to the new virus, which has caused extensive sickness over a short period of time.

Forced social distancing reduced social and physical contacts with others, thereby generating elevated depressed mood, emotional disturbance, boredom, frustration, and blocking access to effective coping strategies such as seeking social support (Lei, et. al., 2020).

The study sought to determine if the surge in Covid-19 infections and the prospect of the virus is a part of our daily lives for a long time (WHO, 2020) and the continued search for laboratory tests for an effective vaccination, exacerbates depressive symptoms among the student population in Saudi Arabia.

COVID-19 pandemic declaration on March 11, 2020, constitutes an extraordinary health, social and economic global challenge. The impact on people's mental health was expected to be high. In a meta-analysis by (Bueno-Notivol, et. al., 2021) on community-based studies in terms of depression conducted during the COVID-19, it was estimated that the pooled prevalence of depression, by searching for cross-sectional, community-based studies listed on PubMed or Web of Science from January 1, 2020 to May 8, 2020 that reported prevalence of depression. A random effect model was used to estimate the pooled proportion of depression. A total of 12 studies were included in the meta-analysis, with prevalence rates of depression ranging from 7.45%

to 48.30%. The pooled prevalence of depression was 25% (95% CI: 18%–33%), with significant heterogeneity between studies ($I^2=99.60\%$, $p<.001$). Compared with a global estimated prevalence of depression of 3.44% in 2017, the pooled prevalence of 25% appears to be 7 times higher, thus suggesting an important impact of the COVID-19 outbreak on people's mental health (Bueno-Notivol, Gracia-García, Olaya, Lasheras, López-Antón, & Santabárbara, 2021).

In a study conducted by (Salari, et al, 2020) about the prevalence of stress, anxiety, and depression among the general population during the COVID-19 pandemic in a systematic review and meta-analysis, it was found that the prevalence of depression in 14 studies with a sample size of 44,531 people was 33.7% (95% confidence interval: 27.5–40.6).

The first case was reported in Saudi Arabia on the 2nd of March by a Saudi national who had travelled to Iran. Consequent cases of infections followed from a few individuals who had travelled to the same country. Saudi Arabia put in place measures to restrict human contact including curfews. Saudi Arabia is a religious country, but the holiest places were disrupted, and on 27th February 2020 entry to Mecca and Madinah was restricted.

The Middle East Respiratory Syndrome Coronavirus (MERS-COV) outbreak originating in Saudi Arabia in 2014 reportedly caused mortality of under a thousand people globally. Studies show how it came to be associated with psychological distress, anxiety, and stress (Al-Rabiaah, et al., 2020). This was a fatal, viral respiratory disease, first reported in Saudi Arabia in August 2012. Research (Naveed, 2020 in Al-Rabiaah, et al., 2020) suggests that some sections of Saudi society suffered from mental health conditions associated with the prevalence of the virus. In the same vein, COVID-19 has caused high rates of mortality around the world and associated mental health issues.

John Hopkins medical centre defines Covid 19 as a respiratory illness caused by the new coronavirus which emerged in 2019. Although still indefinite, symptoms include high temperature and other flu-like symptoms, diarrhea, loss of smell, and lately, fatigue and loss of taste and smell (NHS, 2020) have been added to the list. The virus spreads

through a release of droplets from one infected human to another. Although there have been other diseases caused by coronaviruses, the COVID-19 strain causes more public health concerns because it spreads faster (NHS, 2020; WHO, 2020) and has killed more people worldwide than the previous viruses like SARS in 2003.

In a Saudi study that surveyed 1160 respondents from the general public in the Kingdom of Saudi Arabia of them, 23.6% reported moderate or severe psychological impact of the outbreak, 28.3%, 24%, and 22.3% reported moderate to severe depressive, anxiety, and stress symptoms (Al-khamees et al., 2020). Metropolitan cities like New York and London have been badly affected, while equally densely populated cities like Lagos, Baghdad, and Bangkok seem to have been spared from the same severity (Beech et al., 2020).

The two-meter social distancing guideline was strongly encouraged by the WHO, and many governments is thought to be a safe distance to avoid infection (Du et al., 2020). Some studies argue that the one size fits all two-meter distancing is based on an outdated dichotomy model which assumes viral transmission is either large droplets or small airborne particles (Qureshi et al., 2020). For social distancing beyond two meters the fabrics of social and professional relationships would disintegrate, and it would massively impact economic progress more than the current situation. The COVID-19 pandemic has thus had a major impact on public mental health.

Study Questions:

The study sought to answer the following questions:

1. How worried are you about the Covid-19 virus?
2. Do you find lockdown restrictive?
3. Do you know anyone who has been admitted at hospital due to Covid-19?
4. Do you know anyone who has died of Covid-19?
5. Has your mental health got worse of that?
6. What is the degree of depression among the research sample?

Method:

Study Methodology:

The present researcher followed the descriptive approach due to its appropriateness for the topic and objectives of the study. It deals with existing events, phenomena and practices that exist and are available for study and measurement without the intervention of the researcher.

Participants:

The basic sample was selected from the practical faculties of the University of Medicine, Pharmacy and Applied Sciences (totaling 201). Among all the participants 72 were males (35.82%) and 129 were females (64.18%).

Materials:

Depressive Symptoms Scale:

The initial form of the scale contains 11 items. It should, however, be noted that the results are not a diagnosis of depression but rather an indicator of a measure of depressive symptoms, Responses were graded from high, average, low.

Another screening tool (a set of topic-specific questions created by the researcher). The items were specific to COVID 19 and daily lockdown experiences, for example: 'did you find the lockdown restrictive?' and 'do you know anyone who died of COVID-19?'. This self-report questionnaire was designed to investigate psychological distress among the Saudi students. The questionnaire consisted of five items concerning feelings about the lockdown and consequent social restrictions, impact on self, friends, and family, and impact on personal relationships. Data collection began on the 20th of June at the height of nationwide social interaction restrictions.

Enrolment in the study was by face-to-face verbal, email, and phone call invitations. Participants were encouraged to seek clarification about the study at any point during the research. In addition, they were made aware that they could pull out of the study at any time without obligation.

Validity:**-Content Validity:**

The researcher submitted the scale in its preliminary form to a panel of experts in the field of psychology, consisting of (7) experts, to assure the appropriateness of the scale statements, especially the daily closing phrases for COVID 19. The experts' views percentage of agreement ranged between 80% and 100%.

-Concurrent Validity:

Calculating the correlative validity between the depression scale prepared by the researcher and Zong's Depression scale. Zhong Depression Scale was used as an honesty test, the Zung Self-Rating Depression Scale (ZSDS) (Zung, 1965) which was developed by a university psychiatrist to measure depressive symptoms for the previous two weeks. The items were short, simple statements and scoring is quantitative through the use of a 20-item questionnaire asking participants to respond to how they have been feeling during the past several days. Responses were graded from 'A little of the time' 'Some of the time', 'good part of the time', 'most of the time, and none of the time'. Section 6 has been removed as it is culturally inappropriate. Thus, the scale in its final form consists of 19 items.

At the beginning, the internal consistency validity of the Depression Scale (ZSDS) was calculated, and the correlation coefficients between the statements and the total score ranged between (0.237- 0.857) as shown in the table (1)

Table (1)

Correlation between each item and the total score of the scale (n=130)

Item	R	Item	R
1	.660**	11	.428**
2	0.082	12	.377**
3	.535**	13	.421**
4	.857**	14	.404**
5	.488**	15	0.147
6	.461**	16	.519**
7	.805**	17	.237**
8	.752**	18	.289**

Item	R	Item	R
9	.828**	19	.547**
10	.268**		

The reliability coefficient was calculated using Cronbach's Alpha and Split Half, Spearman-Brown formula was also utilized to compute reliability. The reliability was (0.84, and 0.76), indicating high reliability of the scale.

After confirming the validity and reliability of the Zung Self-rating Depression Scale (ZSDS) (Zung, 1965) on the exploratory sample, the correlation coefficient between the depression scale prepared by the researcher and the (Zung, 1965) was calculated and its value was (0.546).

-Internal Consistency:

To calculate the validity of the internal consistency of the scale, the researcher administered the scale to a sample of (130) members of the study community and calculated the correlation coefficients between the score of each statement and the total score of the scale. Tables (2) show the result respectively.

Table (2)

Correlation between each item and the total score of the scale (n=130)

Item	R
1	.494**
2	.273**
3	.238**
4	.650**
5	.722**
6	.579**
7	.738**
8	.503**
9	.393**
10	0.108
11	.434**

Table (2) shows that the correlation coefficient is significant at 0.01 level indicating that the internal consistency of the scale, except for the item (10). Thus, the scale in its final form consists of 10 items.

Reliability:

- Cronbach Alpha and split half reliability

Cronbach alpha and split half were used to compute the reliability of the scale. The Spearman-Brown formula was also utilized to compute reliability. The reliability was (0.832, 0.794), indicating the reliability of the scale. The degree of the scale in its final form ranges between (10- 30).

Results

Question 1

On a scale of 1 to 10, how worried are you about the Covid-19 virus?

Table (3)

Responses Question 1

Scale	Raw score	Percentage
1	20	10.0 %
2	14	7.0 %
3	12	6.0 %
4	14	7.0 %
5	15	7.5 %
6	13	6.5 %
7	13	6.5 %
8	17	8.5 %
9	43	21.4 %
10	40	19.9 %

The table shows that over 49.75% of the respondents chose a scale of above 7, suggesting that Saudi students were worried about the virus.

Questions 2-5

Table (4)

Responses Question 2-5

Questions 2	Do you find lockdown restrictive?	Yes	70.1 %
		No	29.9 %
Questions 3	Do you know anyone who has been admitted at hospital due to Covid-19?	Yes	35.3 %
		No	64.7 %

Questions 4	Do you know anyone who has died of Covid-19?	Yes	31.3 %
		No	68.7 %
Questions 5	Has your mental health got worse of that?	Yes	52.2 %
		No	47.8 %

It is showed from the above table that a high percentage of (70.1%) found that it is lockdown, while a percentage of (29.9%) found it is unrestrictive. Notably, not many people either knew someone in the hospital or someone who died because of Covid-19. However, it seems that despite not having personal experiences of the virus, more than half felt that their mental health was getting worse (52.2%).

Questions 6:

What is the degree of depression in the research sample?

Table (5)

Degree of depression

V.	N	Mean	Std. Dev.	Weighted Average	Evaluative level*
Depression	201	14.76	2.68	1.47	Low depression

*1>1.67 low, 1.67> 2.34 middle, 2.34- 3 high

Table (5) shows that the sample had a low percentage of depression and symptoms in light of the coronavirus (COVID-19).

Questions 7:

Are there differences in depression between males and females during Covid-19 strict lockdown measures?

Table (6)

Differences in depression between males and females

النوع		N	Mean	Std. D.	T test	Sig.
Depression	Female	129	15.05	3.17	2.498	0.013
	Male	72	14.25	1.31		

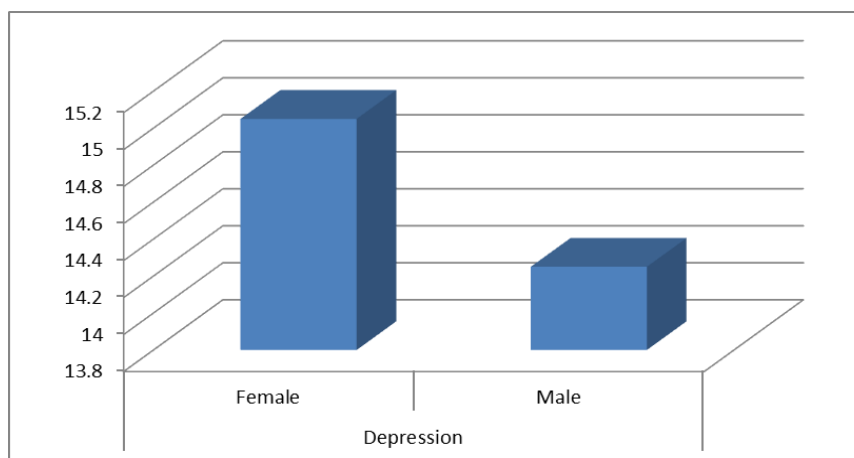


Figure (1) The differences in depression between males and females

It is clear from table (6) that there are statistically significant differences between males and females in the research sample in depression and symptoms in favour of females, at the significance level of 0.05.

Discussion:

Shaqra university is taking positive steps toward support structures for students' mental health conditions. A study by Bahhawi, et al., (2018) on Khat Chewing students suggested that anxiety affected males more while for women it was both anxiety and depression. Mental health is considered a fundamental aspect of human health and studying, and exams have been identified as stressors that might lead to depression (Essel and Owusu, 2017; Browne, Munro, & Cass, 2017). During such time, students usually have an extensive number of tasks to complete each week, which can cause stress, especially with poor organization skills. COVID-19 and subsequent lockdown measures can be added to the environmental factor that can increase students' depression levels.

This study used a tool designed by the researcher consisting of 10 statements and Covid-specific questions were brief with yes/no questions. A longer, structured interview would have given a better insight into participants' feelings about Covid-19 and its restrictive nature. Nonetheless, the collected data did shed light on the student

population's response to Covid-19 and its impact on both their mental health and studies.

Results from this research suggest that although lockdown measures restricted individuals from carrying out their usual social activities, the degree of depression was low, and lockdown measures were viewed positively by many. Explanations ranged from; it is good for health and safety, while some individuals revealed they had improved their IT skills and were studying more and communicating more often with others. Others cited getting more time to memorize the Quran as another added advantage and applauded the government for taking the bold decision to lock down the country. Those who found it unrestrictive gave similar explanations, describing how lockdown measures enabled them to widen their horizons and connect with wider audiences through technology, and also strengthened family bonding.

The results also indicated that Saudi students were worried about the virus. When asked to explain, most stated that the uncertainty of the virus was a concern as it is not known when the vaccine will be found. Some stated that they are worried about being in contact with asymptomatic individuals, self-isolating within a multi-generation household, and the possibility of a worse second wave.

Higher rates of depressive disorders observed among women which have been partly attributed to biological and social vulnerabilities including hormonal influences, and gender inequalities respectively. This indicates that women in Saudi Arabia are more vulnerable to the adverse impacts of the COVID-19 pandemic compared to men. The results are in agreement with other studies (Han, et. al, 2020, Alharb, et. al, 2022, Al-khamees et al., 2020) on increased depression in females.

Conclusions and Recommendations:

Based on the findings obtained by the study, a set of recommendations were presented to government, health, and social care bodies to tailor and implement pertinent well-being and mental health intervention policies to help alleviate a potential surge in mental health conditions among students in university.

Future studies should consider the long-term effects of the pandemic on mental health, adopting a longitudinal design to measure change over time. Additional work should aim at comparing the experiences of the different countries affected by the pandemic to understand the size of the psychological impact and the potential risk and protective factors.

There needs to be closer consideration of public health policies aimed at university students' mental health and well-being. There is inadequate knowledge and insight into stressors for university students and their perspectives on what negatively impacts their mental health. A holistic approach to improving student mental wellbeing should be planned and implemented from different dimensions e.g., teaching and learning, course design, communication and culture, assessments, and student services. All these services need to be designed with students' input. A strong partnership between students and university leaders is needed to ensure better support structures that can alleviate high levels of psychological distress. It is crucial that students feel empowered and listened to issues that affect them. Universities need to identify any barriers to access to services offered, for example, academic skills and counselling. Robust counselling programs are also needed aiming at a diverse student population including mature students. These should be run by appropriately qualified and well-experienced practitioners. While some universities are already offering counselling programs not much is known about their effectiveness.

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